

## Power Quality in the Petrochemical Industry



A momentary power disturbance can shut down an entire process for days, costing the manufacturer millions of dollars.

The U.S. petrochemical industry consumes more than 225 billion kWh of electricity each year. These very important energy customers rely on process continuity. Some processes demand extremely precise controls that are hypersensitive to power variations such as voltage sags or surges. Even minute fluctuations in the power supply can interrupt production and result in costly losses and missed business opportunities.

These interruptions can often be prevented by fortifying process equipment against electrical disturbances. With this goal in mind, engineers from EPRI PEAC Corporation have initiated a project to determine the effectiveness of power quality solutions and identify the best ways to design petrochemical industry equipment to increase compatibility.

By participating in the EPRI *Power Quality in the Petrochemical Industry* project, you will help your customer develop a step-by-step approach to solving the power quality problems specific to their operations. The project will help standardize power quality solutions for the industry, while leveraging resources from an EPRI matching fund.

### Maps Out Solutions to Power Quality Problems for Petrochemical Processors

**PROJECT SUMMARY** This project will develop cost-effective strategies for minimizing the disruptions of power disturbances in petrochemical industry operations. EPRI PEAC Corp. researchers will collect input from you and your customer for use in developing a set of guidelines for minimizing process interruptions. The guidelines will include a standardized investigative procedure for your petrochemical industry customer; a power quality “health check” list, with recommendations for annual inspections of circuits and equipment to ward off problems before they occur; and specifications for process equipment and controls with high immunity to power disturbances.

Over the one-year course of the project, EPRI engineers will develop a set of publications describing various pieces of process equipment, the equipment’s level of susceptibility to power disturbances, and applicable solutions. They will also develop case studies that could provide answers to typical power quality problems encountered in the industry. In addition, the project offers optional support services that address the particular needs of your customer.

#### **DELIVERABLES**


- Primer for energy service providers on major processes used in the petrochemical industry
- EPRI Power Quality Technical Manual, with standardized solutions to power quality problems
- Recommended specifications for the purchase of processing equipment
- Power quality case studies

Optional support services are a one-day visit to the customer site of your choice, including a technical report with findings and recommendations; training for you and your customers; and customized power quality publications.

**RETURN ON INVESTMENT** This project represents a chance for you to improve the value and usability of the power you deliver to your customers—an important accomplishment in the era of energy deregulation. It will provide you with a better understanding of petrochemical processes and how power quality affects them. The project will help you to reduce downtime for petrochemical processors, leading to greater satisfaction and productivity in a key customer market.

**CONTACT INFORMATION** For more information, contact the EPRI Customer Assistance Center at 800-313-3774 or *askepri@epri.com*.

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